

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

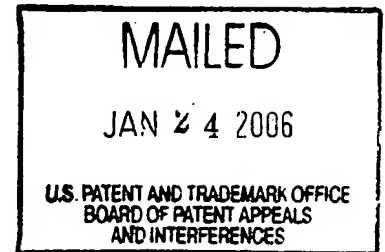
UNITED STATES PATENT AND TRADEMARK OFFICE

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Ex parte BERNARD O. GEAGHAN AND ROBERT S. MOSHREFZADEH

Appeal No. 2005-2313
Application No. 10/052,695

HEARD: DECEMBER 14, 2005



Before KRASS, BARRETT, and DIXON, Administrative Patent Judges.
KRASS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 19, 20, and 22-36.

The invention pertains to touch screens. In particular, a position of a touch on the touch screen is determined by using a touch sensor and a user contact point separate from the touch sensor. Information from both the touch sensor and the user contact point is used to determine the position of the touch on the touch sensor.

Representative independent claim 19 is reproduced as follows:

19. A system for determining information related to a touch on a touch sensor comprising a touch sensor switch electrically connected to the touch sensor, a first user

contact point separate from the touch sensor, the first user contact point driven with a first signal, a first user contact point switch electrically connected to the first user contact point, and a power source electrically connected to the touch sensor switch and the first user contact point switch, wherein the touch on the touch sensor transfers at least a portion of the first signal to the touch sensor, the touch sensor configured to use the transferred first signal to determine information related to the touch on the touch sensor.

The examiner relies on the following references:

Phares	5,815,141	Sep. 29, 1998
Dietz et al. (Dietz)	6,498,590	Dec. 24, 2002 (filed May 24, 2001)

Claims 19, 20, and 22-36 stand rejected under 35 U.S.C. § 103 as unpatentable over Dietz in view of Phares.

Reference is made to the briefs and answer for the respective positions of appellants and the examiner.

OPINION

In rejecting claims under 35 U.S.C. §103, it is incumbent upon the examiner to establish a factual basis to support the legal conclusion of obviousness. See In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some

teachings, suggestions or implications in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness. Note In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). If that burden is met, the burden then shifts to the applicant to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. See Id.; In re Hedges, 783 F.2d 1038, 1040, 228 USPQ 685, 687 (Fed. Cir. 1986); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); and In re Rinehart, 531 F.2d 1048, 1051, 189 USPQ 143, 146-147 (CCPA 1976). Only those arguments actually made by appellants have been considered in this decision. Arguments which appellants could have made but chose not to make in the brief have not been considered and are deemed to be waived [see 37 CFR §41.67(c)(1)(vii)].

With regard to independent claim 19, the examiner contends that Dietz discloses a system for determining information related to a touch on a touch sensor, wherein that system comprises a first user contact point separate from the touch sensor, and wherein the contact point is a user's chair (the examiner refers to column 3, lines 10-14, "chairs [see figure 1] 121-122...include conductive parts...electrically connected to individual receivers"). Referring to column 2, lines 26-28, of Dietz, "Receivers are capacitively coupled to different users, and configured to receive the uniquely identifiable signals," the examiner contends that the reference further discloses that the first user contact point is

driven with a first signal. Moreover, the examiner contends that Dietz discloses that the touch on the touch sensor transfers at least a portion of the first signal to the touch sensor, pointing to column 2, lines 9-11 and 56-59, and asserting the tabletop or plurality of antennae to be the claimed touch sensor.

The examiner also points to column 2, lines 46-52, of Dietz for a teaching of the touch sensor being configured to use the transferred first signal to determine information related to the touch on the touch sensor. The examiner further points to column 2, lines 13-16, of Dietz for a teaching that the signal can be transferred from the user contact point to the touch sensor or from the touch sensor to the user contact point.

The examiner acknowledges that Dietz does not disclose a touch sensor switch electrically connected to the touch sensor, a user contact point switch electrically connected to the first user contact point, and a power source, wherein the touch sensor switch or the first user contact point switch must be closed in order for the system to determine information related to the touch, but the examiner turns to Phares for a touch system with multiple selectable touch regions, wherein each of the touch regions is connected to a switch. Specifically, the examiner identifies Figure 2 of Phares as an embodiment with two such regions.

The examiner further points to column 3, lines 14-19, of Phares for a disclosure of a switching means for making one region sensitive while another region remains insensitive.

The examiner concludes that it would have been obvious to modify Dietz by electrically connecting each of the first user contact points and touch sensors to a switch and by making such regions active with the close of respective switches, as taught by Phares. It is the examiner's contention that the artisan would have been led to make such

a modification based on Phares' teaching that a utilization of a switch means is beneficial "when activation is desired only in the selected region of the touchscreen." The examiner also contends that the closing of a switch to cause some activation is common and consistent with conventional uses of switches. With regard to the power source, the examiner finds this to be "inherent" in that "any type of electrical switch requires a power source to be operable" (answer-page 6).

Appellants contend that the examiner has failed to make a prima facie case of obviousness in that there is no suggestion to make the proposed combination and that, even if made, the proposed combination of references does not teach all of the claimed elements.

We have reviewed the evidence in this case, including, inter alia, the references and the arguments of appellants and the examiner, and we conclude from such review that the examiner has set forth a prima facie case of obviousness with regard to independent claim 19 that has not been successfully rebutted by appellants.

The examiner points out where each of the claimed elements can be found in Dietz, explaining the differences between the instant claimed subject matter and what is disclosed by Dietz, relying on Phares for supplying those perceived differences, and explaining what would have led the artisan to combine these teachings in such a manner as to arrive at the instant claimed subject matter. We can find no fault in the examiner's reasoning.

Appellants, for their part, do not dispute that Dietz discloses what the examiner alleges it discloses. Rather, appellants contend that since Dietz teaches that systems in which a touch sensor acts as a receiver of signals transferred through a user from a signal

driven user contact point is an “inferior” arrangement (principal brief-page 3), and, instead, opts for an antenna configuration for transmitting unique identifiable signals that can be received by a receiver associated with a particular user, the artisan would have been dissuaded from employing Dietz, in combination with anything, for achieving the instant claimed subject matter.

We disagree. Dietz does not “teach away” from the instant claimed subject matter. A “teaching away” by a reference occurs when a person of ordinary skill, upon [examining] the reference, would be discouraged from following the path set out in the reference or would be led in a direction divergent from the path that was taken by the applicant. In re Gurley, 27 F.3d 551, 553, 31 USPQ2d 1130, 1131 (Fed. Cir. 1994). Merely because Dietz teaches two embodiments and prefers one as “superior” (column 5, lines 50), would not be a suggestion that an artisan should never employ the other embodiment. The reference does not discourage an artisan from following the path taken by appellants. It merely teaches two embodiments, one of which is employed by appellants, and one which Dietz considers “superior.” However, Dietz does not discourage taking the path taken by appellants. In fact, Dietz discusses both embodiments and even states that his system “can work in one of two ways” (column 5, lines 44-45). Thus, Dietz recognizes that either one of the alternative embodiments is satisfactory (either a touch surface being a large array of antennas transmitting uniquely identifiable signals to a small number of receivers associated with particular users (the preferred embodiment) or a large array of antennas receiving a small number of uniquely identifiable signals from transmitters associated with particular users), even though Dietz prefers one over the other. It does not disclose that the second embodiment is unworkable, only less preferred. Dietz’s disclosure still teaches the artisan the embodiment employed by appellants.

Accordingly, we do not find a “teaching away” from the instant claimed subject matter by Dietz.

Appellants next argue that Dietz does not teach certain claim limitations such as a touch sensor switch electrically connected to the touch sensor, a user contact point switch electrically connected to a user contact point, and a power source electrically connected to the touch sensor switch and the user contact point switch (principal brief-page 4). While this is true, the examiner recognized these deficiencies in Dietz and turned to Phares in order to supply the deficiencies.

Accordingly, it is not enough for appellants to argue the deficiencies of Dietz alone. Appellants must show that either Phares does not disclose what the examiner has alleged and/or that, for some reason, the skilled artisan would not have sought to combine the teachings of the references. This, appellants have not done. At pages 5-6 of the principal brief, appellants argue that while Phares discloses subdividing at least one of the two conductive films into separated portions, each portion is still a part of the same overall touch screen, whereas, the instant claims require that the user contact point is separate from the touch sensor, not an integral part of it. Moreover, argue appellants, neither portion of the touch screen of Phares is driven with a signal that is transferred to the other due to a touch, as is required by the instant claims.

Again, we are unpersuaded by appellants' argument since the alleged deficiencies of Phares argued by appellants are shown by the examiner to have been taught by Dietz. So, while the examiner has put forth a reasonable case as to why the references would have been combinable and as to how each of the various claimed elements is taught by one or the other of the references, appellants resort to arguing the references individually, rather than arguing why, specifically, in view of the examiner's showing, it would be

improper to modify Dietz by the teachings of Phares. The only argument made out by appellants in this regard is the “teaching away” argument, which we disposed of supra.

Since we are unpersuaded by appellants of any error in the examiner’s analysis, we will sustain the rejection of claim 19, and of its dependent claims 20, 22-26, and 29, under 35 U.S.C. §103.

With regard to claims 27 and 36, appellants argue that Dietz does not disclose that the first user contact point and the touch sensor are mounted in a single housing. Again, we are unpersuaded by appellants’ argument because the examiner recognized this deficiency in Dietz and relied on Phares to supply the deficiency, pointing to Figures 1-3 and column 3, lines 8-11, of Phares for the suggestion of placing the first user contact point and the touch sensor in a “single touch system housing.” Rather than attack, if they could, the examiner’s position as to Phares’ teaching and the reason for the combination, appellants simply state that one reference doesn’t show certain claimed features, even though the examiner clearly relied on the second reference for those features. Accordingly, since appellants have persuaded us of no error in the examiner’s position, we will sustain the rejection of claims 27 and 36 under 35 U.S.C. §103.

Appellants do argue, at page 3 of the reply brief, that Phares does not properly teach or disclose a contact point as recited in the instant claims, since Phares merely discloses a touch sensor sectioned into identifiable regions, none of which is construable as a user contact point. However, the examiner relies on Dietz for the teaching of placing the contact point in various locations and relies on Phares for the suggestion of multiple touch inputs mounted in a single housing, concluding that the suggestion of this combination would have been to place a contact point and a touch input in a single

housing. The examiner's reasoning appears sound to us and appellants have offered nothing to persuade us of error in the examiner's rationale.

With regard to claim 28, appellants argue that Dietz does not disclose the claimed first user contact point being driven with a guard signal that reduces noise in the system. However, the examiner points to column 6, lines 49-53, of Dietz, which discloses that in order to maximize the signal to noise ratio at the receivers, "The frequencies of the transmitted signals are kept low, e.g., under 1 MHz." The examiner states that it "is understood that this constitutes a guard signal" (answer-page 9). While the examiner presents a reasonable rationale for concluding that Dietz suggests the claimed "guard signal," appellants have shown nothing to convince us of any error in the examiner's rationale. Rather, appellants merely allege that Dietz fails to teach or disclose the claimed limitation, but does not attack the examiner's rationale in any way.

Accordingly, since the examiner, in our view, has met his initial burden of establishing a prima facie case of obviousness, the burden shifted to appellants to rebut such a prima facie case. This, appellants have not done, as a general allegation that a reference does not teach or disclose such claimed limitations, without more, is not persuasive of patentability.

Thus, we will sustain the rejection of claim 28 under 35 U.S.C. §103.

With regard to claims 30-35, appellants argue that the claimed limitations are not taught or suggested by Dietz. In particular, according to appellants, Dietz does not teach or disclose a touch sensor and contact point that are associated with switches, the states of the switches being used to determine whether the signal driving the contact point is transferred to the touch sensor by the touch to determine information related to the touch.

Again, we are unpersuaded by appellants' arguments which relate to a single reference when the rejection is based on a *combination* of references and the argued limitations are alleged to be taught in the secondary reference.

With specific reference to claim 34, appellants argue that Dietz's completed circuit, caused by a touch input, will always include ground, whereas the instant claim 34 recites that the sensitivity of a capacitive touch sensor is enhanced by completing a circuit that comprises a user, the first contact point, and the touch sensor and "that does not include a ground."

We agree with the examiner in that Figure 4 of Dietz, and its attendant description, shows a touch sensor as a capacitive touch sensor and the completion of the circuit, comprising a user, a first contact point, and the touch sensor, does not include a ground. There is no ground shown in Figure 4 and there is none described by Dietz. We also note, with curiosity, as did the examiner, that whereas the claim calls for the circuit not including a ground, Figures 5-8 of appellants' application do include a ground. In view of Dietz's Figure 4 and appellants' Figures 5-8, it is not clear to us why appellants contend that in Dietz's system, "a completed circuit caused by a touch input will always include a ground" (principal brief-page 5).

At pages 2-3 of the reply brief, appellants further explain that Figure 4 of Dietz is merely a "simplified circuit diagram..." and that it "would be expected that at least the transmitter includes a power source that is connected to an earth ground." We disagree. If there is such a power source requiring a ground, then it would appear that appellants' circuit would also require this ground. But, appellants argue, their specification describes embodiments such as a hand-held mobile device that has its own internal power source, not connected to earth ground, whereas Dietz does not disclose such an embodiment.

We find nothing in Dietz requiring the ground argued by appellants. If appellants' device may be a hand-held device with its own internal power source, so too may Dietz's device. There is nothing within Dietz's disclosure precluding such a device and there is nothing in the instant claims requiring such a device. In view of Dietz's Figure 4, showing no ground, and nothing in the specification of Dietz to explain that there must be a ground, we find no distinction between what is set forth in instant claim 34 and what is clearly suggested by Dietz.

Accordingly, we will sustain the rejection of claims 30-35 under 35 U.S.C. §103.

The examiner's decision rejecting claims 19, 20, and 22-36 under 35 U.S.C. §103 is affirmed.

AFFIRMED

BOARD OF PATENT
APPEALS
AND
INTERFERENCES

Appeal No. 2005-2313
Application No. 10/052,695

Page 13

3M INNOVATIVE PROPERTIES COMPANY
P.O. BOX 33427
ST. PAUL, MN 55133-3427